

Appl. No. 10/693,360
Response dated August 30, 2007
Reply to Final Action of May 11, 2007

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Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Previously presented) An absorbable sealant for biomedical devices comprising a segmented copolyester having a molecular weight of more than 5 kDa, a glass transition temperature of less than 35°C, and low degree of crystallinity evidenced by a heat of fusion of less than 25 J/g, the segmented copolyester made by a process comprising the steps of:

 reacting at least one cyclic monomer selected from the group consisting of trimethylene carbonate, ϵ -caprolactone, p-dioxanone, glycolide, lactide, and 1,5-dioxepan-2-one with a polyhydroxy compound, thereby forming an amorphous, polyaxial polymeric initiator; and

 end-grafting at least one cyclic monomer selected from the group consisting of trimethylene carbonate, ϵ -caprolactone, p-dioxanone, glycolide, lactide, and 1,5-dioxepan-2-one onto the polyaxial initiator.
2. (Previously presented) An absorbable sealant as set forth in claim 1 wherein the biomedical devices are selected from synthetic vascular grafts, endovascular stent grafts, and conduit stabilizing stents.

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3. (Cancelled) An absorbable sealant as in claim 1 wherein the segmented copolyester is made by a process comprising the steps of:

reacting at least one cyclic monomer selected from the group consisting of trimethylene carbonate, ϵ -caprolactone, p-dioxanone, glycolide, lactide, and 1,5-dioxepan-2-one with a polyhydroxy compound, thereby forming an amorphous, polyaxial polymeric initiator; and
end-grafting at least one cyclic monomer selected from the group consisting of trimethylene carbonate, ϵ -caprolactone, p-dioxanone, glycolide, lactide, and 1,5-dioxepan-2-one onto the polyaxial initiator.

4. (Withdrawn) An absorbable sealant as in claim 1 wherein the segmented copolyester is made by a process comprising end-grafting a polyalkylene succinate with at least one cyclic monomer selected from the group consisting of trimethylene carbonate, ϵ -caprolactone, p-dioxanone, glycolide, lactide, and 1,5-dioxepan-2-one.

5. (Withdrawn) An absorbable sealant as in claim 1 wherein the segmented copolyester is made by a process comprising end-grafting a polyalkylene glycol with at least one cyclic monomer selected from the group consisting of trimethylene carbonate, ϵ -caprolactone, p-dioxanone, glycolide, lactide, and 1,5-dioxepan-2-one.

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6. (Withdrawn) An absorbable sealant as in claim 1 wherein the segmented copolyester is made by a process comprising end-grafting a block copolymer of polyethylene glycol and polypropylene glycol with at least one cyclic monomer selected from the group consisting of trimethylene carbonate, ϵ -caprolactone, p-dioxanone, glycolide, lactide, and 1,5-dioxepan-2-one.
7. (Withdrawn) An absorbable sealant as in claim 1 wherein the segmented copolyester comprises a polyether-ester.
8. (Original) An absorbable sealant as in claim 1 wherein the segmented copolyester further comprises pendant carboxyl-bearing side groups.
9. (Previously presented) An absorbable sealant as in claim 8 wherein the process for making the carboxyl-bearing, segmented copolyester comprises the further steps of:
 - reacting a the segmented copolyester with maleic anhydrid under free-radical conditions, thereby introducing at least one anhydride group per chain; and
 - hydrolyzing the anhydrid-bearing copolyester, thereby forming succinic acid based side groups.
10. (Withdrawn) An absorbable sealant as in claim 8 wherein the segmented copolyester comprises a polyether-ester.
11. (Withdrawn) An absorbable sealant as in claim 10 wherein the segmented copolyester is ionically conjugated with a basic bioactive agent.

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12. (Withdrawn) An absorbable sealant as in claim 11 wherein the basic bioactive agent comprises an antithrombotic drug.
13. (Cancelled) An absorbable sealant as in claim 1 wherein the segmented copolyester is admixed with a further polyether ester, the further polyether ester having pendant carboxyl-bearing side groups and ionically conjugated with a basic bioactive agent, the segmented copolyester and the further polyether ester mixed at a ratio of between about 9:1 and about 2:8.
14. (Cancelled) An absorbable sealant as in claim 13 wherein the further polyether ester is a liquid at room temperature and wherein the further polyether-ester is made by a process comprising end-grafting a liquid polyethylene glycol with trimethylene carbonate and glycolide.
15. (Withdrawn) An absorbable sealant as in claim 11 wherein the bioactive agent is an antimicrobial compound.
16. (Withdrawn) An absorbable sealant as in claim 11 wherein the bioactive agent is an antiproliferative compound.
17. (Original) An absorbable sealant as in claim 1 further comprising at least one bioactive agent selected from the group consisting of anticoagulant agents, antiproliferative agents, antithrombotic agents, anti-inflammatory agents, antineoplastic agents, antiangiogenic agents, and antibiotic agents.
18. (Withdrawn) An absorbable sealant comprising an ionic conjugate made by the process comprising reacting a basic bioactive agent selected from the group consisting of anticoagulant agents, antiproliferative agents,

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- antithrombotic agents, anti-inflammatory agents, antineoplastic agents, antiangiogenic agents, and antibiotic agents with an absorbable, carboxyl-bearing polyester having a molecular weight of less than about 10 kDa.
19. (Withdrawn) An absorbable coating comprising an ionic conjugate made by the process comprising reacting a basic bioactive agent selected from the group consisting of anticoagulant agents, antiproliferative agents, antithrombotic agents, anti-inflammatory agents, antineoplastic agents, antiangiogenic agents, and antibiotic agents with an absorbable, carboxyl-bearing polyester having a molecular weight of less than about 10 kDa.
20. (Withdrawn) An absorbable sealant comprising a blend of a solid matrix comprising a carboxyl-bearing copolyester and a liquid carboxyl-bearing polyether-ester, the blend further comprising at least one basic bioactive agent selected from the group consisting of anticoagulant agents, antiproliferative agents, antithrombotic agents, anti-inflammatory agents, antineoplastic agents, antiangiogenic agents, and antibiotic agents, wherein the basic bioactive agent is at least partially conjugated with the carboxyl groups of at least one of the solid matrix and the liquid polyether-ester.
21. (New) An absorbable sealant for biomedical devices comprising a polyaxial segmented copolyester having a molecular weight of more than 5 kDa, a glass transition temperature of less than 35°C, and low degree of crystallinity evidenced by a heat of fusion of less than 25 J/g.

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22. (New) An absorbable sealant as set forth in claim 21 wherein the biomedical devices are selected from synthetic vascular grafts, endovascular stent grafts, and conduit stabilizing stents.
23. (New) An absorbable sealant as in claim 21 wherein the segmented copolyester further comprises pendant carboxyl-bearing side groups.
24. (New) An absorbable sealant as in claim 21 further comprising at least one bioactive agent selected from the group consisting of anticoagulant agents, antiproliferative agents, antithrombotic agents, anti-inflammatory agents, antineoplastic agents, antiangiogenic agents, and antibiotic agents.